WASHINGTON STATE UNIVERSITY
BENTON COUNTY EXTENSION

Straw Bale Gardening

What is a Straw Bale Garden?

A straw bale garden bed starts with a bale of straw. The bale is first "conditioned" and then vegetable plants are planted and grown inside the bale. A variety of crops can be grown in bales, including tomatoes, peppers, eggplant, squash, melons, and herbs. Bales are placed on the ground with no need to dig in the soil. The bales create a raised bed making it easy to care for garden plants and harvest.

Advantages

✚ Inexpensive way to create raised beds for gardening.
✚ No digging or soil preparation is required, a big advantage when you have hard or rocky soil.
✚ Bales can be placed on concrete or asphalt paving.
✚ Bales are over two feet tall which makes gardening more accessible for gardeners who can't bend over.
✚ The bales are not permanentand are usually removed at the end of the season.
✚ Used bales can be used in a compost pile or spread on the ground to enrich the soil.

Getting Started

Locate a local source of straw bales, wheat or oat straw. In the region of eastern Washington, straw bales should be easy and inexpensive to purchase ($5.00 or less per bale.) Check for sources at the local farm supply stores. You will want a bale that is held together tightly with baling twine encircling the bale in two to three places. Old straw bales work well if bales are still held tightly together by the twine. Hay bales can be used, but they contain more weed and grass seeds that will grow.

Find a location for your bales where they'll get at least six hours or more of full sun. If you're placing the bales on lawn or bare soil, place 4-5 sheet thick sections of newspaper on the ground under the bales, leaving several inches sticking out along the base of the bales. This helps prevent grass and weed growth at the bottom of the bales. Situate the bales so that the twine is on the side and one of the cut sides faces upward.

Bale Conditioning

- Water the new bales thoroughly and keep them wet for 3 days. Keeping the bales moist is very important. (Once the bales have been watered they will be very heavy, so be sure they are situated where you want them.) As the inside of the bales begins to decompose, they will start to warm up. This is part of the conditioning process.
- On days 4, 5, and 6, sprinkle the top of each bale with 1 cup of ammonium sulfate (21-0-0) or a half cup of urea (46-0-0), watering the fertilizer in well after application. This speeds up decomposition. On days 7, 8, and 9 cut the amount of fertilizer per bale in half.
- On day 10, stop adding fertilizer, but keep the bales moist.
- On the day 11, feel the top of the bale checking for heat. If still hot, check everyday until it cools down to body temperature or lower, still keeping bales moist.
- Once cool to touch, you can plant your bale garden. If you are unsure, use a meat thermometer to measure the heat several inches down inside the bale.
- If weeds, oat grass, or alfalfa starts to sprout in your bales, remove the plants when small. Because the straw is decomposing, mushrooms may also sprout from the bale. There is no need to remove them, but they could be poisonous so don't eat them.

Extension programs and employment are available to all without discrimination.
Evidence of noncompliance may be reported through your local Extension office.

Planting

Straw bales should be ready for planting three to four weeks after conditioning begins. To plant transplants, such as tomatoes, dig a hole in the top of the bale. Loosen transplant roots and then place the plant in the hole and gently firm the straw and some quality potting mix around the plant roots. If you want to plant seeds, make some holes in the straw and fill them with potting mix and then plant your seeds in the potting mix. Water immediately after planting.

Suggested Number of Plants Per Bale

2-3 Tomatoes
4-6 Cucumbers
2 Pumpkins
2-3 Zucchini
4 Peppers
2-4 Squash
2 Winter Squash
Lettuce spaced per package directions
Beans space per package directions

Watering

Keep the bales moist by watering them daily and don't let the bales to dry out. If the bales aren't kept moist by sprinklers, porous wall soaker hose or drip system can be used to apply water.

Fertilizing

The straw does not provide all the essential nutrients need for plant growth like soil or a premium potting mix does, so straw bale plants need to be fertilized once a week using a water soluble garden fertilizer containing nitrogen, phosphorus, and potassium and micronutrients. The oldest leaves of vegetable plants turn yellowish if they are deficient in nitrogen. Nitrogen deficiency is common when growing plants in straw bales. Potassium deficiency shows up as a purpling of the leaves and brown leaf edges can indicate a potassium deficiency.

Recycle

Bales will usually last for only one growing season, two at the very most. After the growing season is over and the crops have been harvested, the bales can be recycled by placing them in the compost pile or working the rotted straw into the soil.

For more information on strawbale gardening:

www.tulsamastergardeners.org/cgi-bin/redir.cgi?fsnum=2264

http://www.co.clay.mn.us/Depts/Extensio/ExAPHydr.htm

http://anr.ext.wvu.edu/lawn_garden/straw_bale_gardening